IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	10/821,434	Confirmation No. :	1239
Applicant	:	Charbel Khawand		
Filed	:	April 9, 2004		
TC/A.U.	:	2686		
Examiner	:	CONTEE, JOY KIMBERLY		
Docket No.	:	7463-37 (CE11334JI017)		
Title	:	**EFFICIENT SYSTEM AND METHOD OF MONITORING NEIGHBORING CELLS IN A COMMUNICATION SYSTEM**		

Certificate of Transmission/Mailing
CERTIFICATE UNDER 37 CFR 1.8(a)
I hereby certify that this correspondence addressed to Mail Stop Amendment, Commissioner for Patents is being transmitted via facsimile No 571-273-8300 on May 1, 2006

Paul Meles

Pablo Meles, Registration No. 33,739

DECLARATION UNDER 37 C.F.R. §1.131
OF CHARBEL KHAWAND

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Charbel Khawand hereby declare:

1. I am a named inventor of the subject matter claimed in the above-captioned application.

2. I have read the Office Action mailed January 30, 2006.

3. I am an engineer employed by Motorola, Inc. (hereinafter "Motorola").

4. Motorola had invested substantial time and effort into the research, development, and marketing of their products, and in an effort to protect its rights in all new inventions, Motorola requests

that all employees prepare and submit Disclosure forms as early as reasonably possible upon conception by the inventor(s).

5. As a named inventor for this invention, I prepared and submitted the attached Motorola Disclosure CE11334JI017 (18804) pursuant to Motorola guidelines.

6. Motorola Disclosure CE11334JI017 (18804) was originally submitted for consideration using Motorola's customary Innovation Disclosure process for review by a patent committee as early as March 11, 2003. The content of the disclosure has not been subsequently modified. The disclosure represents a fully conceived and workable invention as written. I reviewed the claims of the above-mentioned patent application prior to submission of the application to assure the claimed invention was fully supported by the disclosure in light of the invention disclosure and art known at the time of disclosure.

4. I am the inventor who conceived of the above-entitled invention in the United States prior to the filing date or priority date of U.S. Published Patent Application No. 2004/0192326 to Stern-Berkowitz et al., which has a filing date of March 26, 2004 and a provisional application date of March 27, 2003.

5. I conceived of the claimed subject matter by at least as early as March 11, 2003.

6. Motorola's patent committee reviewed the Motorola Disclosure CE11334JI017 (18804) in due course including review by Motorola's In-House Patent counsel on September 16, 2003. Motorola subsequently hired outside counsel on January 20, 2004 to prepare and file the above-mentioned patent application.

7. I exercised diligence regarding the invention at least from March 27, 2003 (the filing date of the provisional of Stern-Berkowitz et al.) to April 9, 2004 which is the filing date of

my patent application. The diligence related activities included working with outside counsel to prepare and submit a patent application based on the originally submitted disclosure.

8. In light of the above, I submit that reasonable diligence towards the claimed invention was exercised during the time period from at least as early as March 27, 2003 to April 9, 2004 (filing date of the my patent application).

9. I further state that all statements made herein are of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: May 1, 2006

Charbel Khawand

STATE OF FLORIDA)
) ss: PLANTATION
COUNTY OF BROWARD)

The foregoing instrument was sworn to and subscribed before me this 1st day of May, 2006, by Charbel Khawand, who is personally known to me.

(SEAL)

S. Wiltshire
Commission #DD204246
Expires: Apr 16, 2007
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Notary Public

Silvana Wiltshire
(Print, Type or Stamp Commissioned Name of Notary Public)

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CE11008N (18119)
CE11243R (18614)
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CE11006N (17893)

Disclosure CE11334JI017 (18804)

Print

ID:	**CE11334JI017 (18804)**
Title:	**Early Rejection of Neighbor/Serving Cells As Good Serving Cell Candidates By Load Monitoring While Measuring**
Innovators:	Charles Khawand
Status:	Awaiting Filing
Disposition:	Pursue
Submitted Date:	Mar 11, 2003
Review Date:	Jan 15, 2004
Sector:	GTSS
Patent Committee:	Plantation - iDEN Subscriber Group - iDEN Data Capability
Business Unit:	Analog Mixed Signal Technology Center
Organization:	GTSS, IDENWLAN, ISG, PROD DEV,
Department:	EX565
Submit Country:	USA

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WORKFLOW

First Innovator	Charbel Khawand (Charles)	Verification Complete 3/11/2003
Witness	Bin Liu	Acknowledgement Complete 3/13/2003, Notebook Signed

Witness	Jianping W Miller	Acknowledgement Complete 3/13/2003, Notebook Not Signed
Manager	Chin P Wong	Acknowledgement Complete 3/28/2003
Technical Reviewer	Eric T Eaton	Review Complete 9/16/2003
Technical Reviewer	Anthony Rodrigues (Tony)	Review Complete 5/29/2003
Technical Reviewer	Michael J Rudowicz (Mike)	Review Complete 8/12/2003
Attorney Reviewer	Larry Brown	Review Complete 9/16/2003

REVIEW INFORMATION

Technical Reviewer	Eric Eaton
Technical Reviewer	Tony Rodrigues
Technical Reviewer	Mike Rudowicz
Attorney Reviewer	Larry Brown
Grading Results	

DOCUMENTS

Document Name	Description	Document Type	Uploaded By	Uploaded Date	Size
patent 031103.ppt	neighbor cell	Unspecified		Mar 11, 2003	425 Kb

QUESTIONS

Name of Innovation or Engineering Development?

Early Rejection of Neighbor/Serving Cells As Good Serving Cell Candidates By Load Monitoring While Measuring

What is the problem(s) to be resolved by or need(s) for your idea?

In any mobile communication systems channel capacity and communication resource availability is a concern for both the system operator and mobile users. Mobile users desire to have readily available access to communication resources, and system operators want to maintain a level of quality in the communication resources it offers so that even when a particular cell or serving area is operating at capacity, other users in the serving area who desire access to communication resources do not interfere with users presently using communication resources. In other words, Packet Data All-IP core networks allow for a negotiation of service. Mobile stations usually negotiate a certain QoS with their core network before they are granted a dedicated data channel. This negotiation differs from one system to another. However, common to all systems is the fact that most service requests are a repeat in terms of data rates, spreading factors, mean packet delay and packet loss, etc. The negotiation for service such as Motorola PTT Dispatch, can be also seen as a repeat each time the mobile station makes a request for service (e.g. Dispatch users). And, commencing the negotiation does not guarantee a granted service. This is certainly true in crowded areas. In addition, the time it takes a mobile to realize success or failure is usually long enough to cause wasted battery and increased system noise with no guarantee of service. This is a problem in a VoIP as well as conventional circuit switched networks. In order to solve this problem, the idea proposes the use of the earliest part of the decision for negotiation stage: Choose the right neighbor cells to measure and initiate them as serving cells candidates based on their system loading indicators.

What patents or publications describe your idea and why don't they resolve the problem(s) or fulfill the need(s)?

Patents

US6526286 B2
Power management system for a mobile unit by reduced neighbor cell (^) scanning
US20020193111 (^) A1
METHOD OF ESTABLISHING AN ADAPTIVE PUBLIC NEIGHBOR CELL (^) LIST FOR MOBILE STATIONS OF A PRIVATE CELLULAR SYSTEM
US6418127 (^) B1
Power consumption reduction method in a digital mobile radio

system and a mobile radio station
US6418127 (^) B1
Power consumption reduction method in a digital mobile radio system and a mobile radio station
US6308066 (^) B1
Method to determine neighbor cell (^) data in a mobile cellular system and a mobile

What is the idea you are disclosing? Please provide a written description summarizing the idea. Please define all acronyms and other terms of art used.

When Mobiles camp on serving cells they expect certain services to be met. For instance, it is not sufficient to camp on a cell but to also be able to take advantage of the services offered. If a DISPATCH user camps on a new cell, it requires DISPATCH services to be extended to it. However, the Mobile today cannot tell which neighbor can or cannot meet its service needs until it actually camp on the new cell and request a service. That is a waste of Battery life and an injection of channel noise that could deteriorate the performance on this cell for all users. Instead, this idea provides a way for Mobiles to learn which neighbor cells are worth monitoring (e.g. another battery saving if the mobile skips the monitoring of unusable cells). Choosing the right neighbor as a potential serving cell based on services that it provides, the total loading of each service supported in addition to SQE generates more channel capacity, more battery life, better user experience and a better balance of over-the-air resources.

The idea is to make better use of the monitoring window that Mobiles look at to measure neighbor cell SQE. Today, in any of the systems that are available, GSM, WCDMA, CDMA, TDMA and iDEN, Mobiles make a SQE reading to qualify neighbor cells. The frequency of neighbor cell measurements vary but it is common to be frequent. The idea DOES NOT INCREASE the measuring window nor does it contributes to any battery life reduction in its implementation. Instead, the idea suggests the reading of the window with useful information instead of random IQ data measurement. It suggests a neighbor cell measurement window where the IQ symbols mean three things:

1- Services supported
2- Load measurements for each service supported
3- SQE

This information could be contained in a codeword that the Mobile decipher to extract the service supported and the process load of each of those services at the time of measurement.
Details of the invention are detailed in the attachement.

How does this idea resolve the problem(s) or fulfill the need(s) in a new way?

Today, choosing the right neighbor as a potential serving cell is solely based on a SQE value. What this idea proposes is not only a SQE measurement but also a load and a Service Measurement. Instead of having each mobile station measure all potential neighbors and determines after camping that the cell does not support the service or the cell does not have the bandwidth to support the service, the mobile abstain from measuring this neighbor (for a random time) and moves on to the next. This guarantees at least that the mobile smartly choose a neighbor to provide its needs once it camps on the new cell. For a dispatch user, this could mean a difference between a PTT busy (e.g. bonk) and PTT going through. In addition, Cells can balance themselves by moving future mobile camping candidates away to other neighbors, thus balancing themselves better.

How or where will this idea be used (e.g. what process or product will it be applied to)?

This idea applies to mobile stations that monitor neighbor cells. Monitoring Cells and requesting services is a pretty common process that is deployed on conventional systems. GSM, iDEN, UMTS, GPRS/EDGE, and CDMA all behave similarly to provide neighbor cells measurements for mobiles.

Please enter one or more key words that may be used to identify your disclosure.

Do you plan to disclose your idea outside of Motorola (e.g. conference, publication, customer meeting, product offering, etc.)?

NO

Is your idea known or has it been disclosed outside of Motorola without a duty of confidence (e.g., non-disclosure agreement, joint development agreement, etc.)?

NO

Has a product incorporating your idea been sold, offered for sale, placed in production, qualification, sampled, described in any publication (including Motorola promotional literature), marketed, shipped to anyone outside of Motorola (customer or distributor), or placed into inventory?
NO

What is the earliest verifiable date that you communicated your idea to an individual that is NOT an innovator (e.g., the date a non-innovator witness signed your engineering notebook)?
Sep 1, 2002

Was your idea created or developed through work performed with a consortium, alliance, government contract, university, or joint venture?
NO

Please specify the Export Control Classification Number(s) (ECCN) to which this disclosure pertains
Unknown

STANDARDS

None Selected

KEY TECHNOLOGIES

GTSS - 031 Over-the-Air Protocols: 2G
GTSS - 032 Over-the-Air Protocols: 2.5G
GTSS - 033 Over-the-Air Protocols: 3G
GTSS - 034 Over-the-Air Protocols: 3.5G
GTSS - 040 Radio Technologies
GTSS - 052 Network Technologies: Distributed Architecture
GTSS - 053 Network Technologies: Mobility Management

INNOVATORS

Charbel Khawand (Charles)

The address and personal information for this innovator should be treated as confidential.

Commerce ID:	10089629	Core ID:	ECK003
Phone:	9547234510	Fax:	
Email:	ECK003@email.mot.com		
Department:	EX565	Location:	FL08
Mail Drop:	52-8HH	Manager:	Chin Wong
Sector:	GTSS	Business Unit:	Blank
SSN:	590424505	Citizenship:	USA
Residential Address:	13411 SW 2nd STREET MIAMI, FL 33184 USA	Mailing Address:	13411 SW 2nd STREET MIAMI, FL 33184 USA

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Intellectual Property Department
Patents, Trademarks and Licensing

January 20, 2004

Pablo Meles
Akerman, Senterfitt & Eidson, P.A.
Las Olas Center II
350 East Las Olas Blvd.
Suite 1600
Fort Lauderdale, Florida 33301
Re: Motorola Disclosures

Dear Pablo,

Enclosed are four disclosures that we are submitting to your firm.

Buni case will serve as liaison between Akerman Seneterfitt et al. and inventors in Akerman's effort to produce final drafts of patent applications in 30 days. To that end, Buni must be copied on all drafts sent to inventors and Buni should be contacted to resolve issues involving inventor lack of response.

Instructions for cover letters accompanying drafts applications to inventors to include a date by which inventors should provide comments/revisions to draft applications. The date should be set at 5 business days from the date the draft is provided to the inventors. The cover letter shall also inform the inventors that the 5 day turn around time has been set by Motorola and should be strictly adhered to. Buni will monitor the process to ensure that inventors are responding by the deadlines set.

Buni Case Contact Information	(954) 723-6152 - Buni.Case@motorola.com

Corporate Offices
1303 E. Algonquin Road., Schaumburg, IL 60196 (847) 576-5218
Telex No. 28 25 62 Fax No. (847) 576-3750

Docket Number	CE11334JI017
First Named Inventor	Charles Khawand
Contact Information	(954) 723-4510 - ECK003@motorola.com
Title of Disclosure	Early Rejection of Neighbor/Serving Cells As Good Serving Cell Candidates By Load Monitoring While Measuring
Managing Attorney/Agent Information	Larry Brown (954) 723-4295 - lgbrown@motorola.com
Motorola Illustrator Information	Bill Murry (954) 723-3821 - EBM002@motorola.com

Docket Number	CE12442JME
First Named Inventor	Jim Tracy
Contact Information	(954) 723-6544 - Jim.Tracy@motorola.com
Title of Disclosure	Wearable electronic devices as independent actuating components
Managing Attorney/Agent Information	Larry Brown (954) 723-4295 - lgbrown@motorola.com
Motorola Illustrator Information	Bill Murry (954) 723-3821 - EBM002@motorola.com

Docket Number	CE12409JME
First Named Inventor	Dave Fredley
Contact Information	(954) 723-4839 - Dvae.Fredley@motorola.com
Title of Disclosure	High efficiency lightguide for LCDs
Managing Attorney/Agent Information	Larry Brown (954) 723-4295 - lgbrown@motorola.com
Motorola Illustrator Information	Bill Murry (954) 723-3821 - EBM002@motorola.com

Docket Number	CE12004JDP
First Named Inventor	Steve Carsello
Contact Information	(954) 723-5784 - Steve.Carsello@motorola.com
Title of Disclosure	Method for Reducing Collisions in an Asynchronous Communication System Using Preamble Waveform Sets
Managing Attorney/Agent Information	Larry Brown (954) 723-4295 - lgbrown@motorola.com
Motorola Illustrator Information	Bill Murry (954) 723-3821 - EBM002@motorola.com

Docketing Department Address	Intellectual Property – Docketing 8000 West Sunrise Boulevard FL08 - 1610 Plantation, FL 33322-9947
Invoices Address	Motorola Law Department - Finance 1303 E. Algonquin IL01- 11th Floor Schaumburg, IL 60196
Outsourcing Administrator	Leo Donlin (847) 538-2450 – ald080@motorola.com

Please provide us with cost estimates for the disclosures.

Sincerely,
Leo A. Donlin
Outsourcing Administrator
Motorola, Inc.